

Applicants have canceled present claims 27-29, 31-34, 36-38. 40-43, 45-47, 49-57 and 65-67 without prejudice, in the interest of facilitating the issuance of the other pending claims. Applicants, however, expressly reserve the right to file a continuation application directed to the invention of canceled 27-29, 31-34, 36-38. 40-43, 45-47, 49-57 and 65-67 and any other unclaimed subject matter.

As required by the Examiner, Applicants have amended the Specification in the Summary of the Invention to reflect amended claim 25 and new claim 79.

Claim Rejections Under 35 U.S.C. § 102 (e)

Pending claim 25 stands rejected under 35 U.S.C. 102 (e) as being anticipated by U.S. Patent No. 6,051,236 ("Portman").

Portman discloses a nutritional composition for optimizing muscle performance during exercise. The dry nutritional composition includes carbohydrates and proteins wherein carbohydrate is in excess of protein. Specifically Portman discloses a ratio in the range of 2.8 to 4.2 parts of the carbohydrates to 1.0 part of the proteins. Thus, Portman, overall teaches only carbohydrate greater than protein.

Pending claim 25 recites carbohydrate and protein wherein carbohydrate is less than protein. Therefore, claim 25 is not anticipated by Portman because Portman does not disclose all the elements of claim 25.

In view of the foregoing remarks Applicants respectfully request that the rejection for anticipation be withdrawn.

Claim Rejections Under 35 U.S.C. § 103

Claim 25 has been rejected as obvious over Portman in view of Doi et al., Kim et al., Droge et al. Larner et al. Jableck et al. Maxwell et al. and Food Chem News.

Applicants believe claim 25 is not obvious over the cited prior art because there is no motivation to modify the primary reference, Portman, to arrive at the claimed invention.

As stated above, Portman discloses a nutritional composition wherein carbohydrate is in excess of protein by a ratio in the range of 2.8 to 4.2 parts of the carbohydrates to 1.0 part of the proteins. Moreover, Portman teaches a critical ratio of carbohydrate to protein of 4 to 1 and that excessive protein renders their nutritional composition inoperative because protein inhibits gastric emptying and therefore rehydration.

However, more **protein can be less effective, as too much protein can have an adverse effect on gastric emptying**. Protein stimulates a peptide called cholecystikinin (CCK) which slows stomach emptying. In the recovery phase, decreased gastric emptying can slow the critical process by which fluid and electrolytes are replenished. CCK is also stimulated by fat which points up the negative in including fat in a recovery drink or immediate post exercise meal. The challenge is how to gain the benefits of protein without the negative effect on gastric emptying. Our research has shown that there is a **critical ratio** of carbohydrate to protein, termed as the Optimum Recovery Ratio or OR2. When the aforementioned ratio of carbohydrate to protein is 4 (or example 56 grams of carbohydrate and 14 grams of protein) the insulin stimulating action of protein does not appear to interfere with the essential rehydration phase as shown by our research (See FIG. 1).

See Portman at col. 11, lines 63 to col. 12, line 12. (*emphasis added*).

Thus, **Applicants believe that one of skill in the art would not be motivated to go outside the range of Portman**. If anything, Portman teaches away from a supplement wherein the weight amount of said protein is greater than the weight amount of said carbohydrate as recited in claim 25. Applicants believe that non of the other references cited by the Examiner are properly combinable with Portman in view of Portman's express teaching of a restricted range of carbohydrate to protein.

In short, Portman alone or in combination with the other cited art does not render the claims obvious because based on Portman one of skill in the art would never be

motivated to use a composition wherein the weight amount of said protein is greater than the weight amount of said carbohydrate.

Applicants respectfully request that the rejection for obviousness be withdrawn.

New Claims 69-87

Applicants believe that the foregoing remarks also apply to pending claims 69-87 and that these claims are not anticipated by Portman or rendered obvious by Portman alone or in combination with the other prior art references.

Claims 69-87 add no new matter because these claims are fully supported in the specification as is shown in the table below.

CLAIM	SUPPORT IN THE SPECIFICATION
25. A method for supplementing the diet of an athlete, comprising administering as part of the diet an effective amount of a supplement comprising an effective amount of L-arginine, a source of amino acids and an effective amount of at least one substance which increases nitric oxide production in the body selected from the group consisting of glycosidal saponins, ginseng, N-acetyl cysteine, glucomannan and folic acid, wherein the source of amino acids is a protein and the composition further comprises a carbohydrate, wherein the weight ratio of protein to carbohydrate is about 7 to 1.	Support can be found in Example 1, page 10, line 10 to page 11, line 27 which discloses a food supplement comprising, <i>inter alia</i> , Protein 20 g, Carbohydrates 3 g, arginine, glycosidal saponins, ginseng, N-acetyl cysteine, glucomannan and folic acid. Since the composition disclosed in Example 1 comprises Protein 20 g, and Carbohydrates 3 g, the weight ratio of protein to carbohydrate is about 7 to about 1. Further support can be found in Example 2, page 12, lines 2-6.
69. The method of claim 25, wherein one serving of the supplement provides about 20 grams of protein and about 3 grams of carbohydrates.	The specification supports claim 69 because the specification discloses a food supplement comprising 20 g protein and 3 g carbohydrate. See page 10, lines 16-17.
70. The method of claim 25, wherein one serving of the supplement further provides about 1.5 grams of fat.	The specification supports claim 70 because the specification discloses a food supplement comprising about 1.5 grams of fat. See page 10, line 21.
71. The method of claim 25, wherein said protein comprises whey protein.	The specification supports claim 71 because the specification discloses a food supplement comprising whey protein. See page 10, line 24-28 and page 6, lines 5-20.
72. The method of claim 25, wherein one serving of the supplement is about 28 grams and the supplement is administered more than once daily.	The specification supports claim 72 because the specification discloses one serving of the supplement is about 28 grams and the supplement is administered more than once daily. See page 10, lines 12-15.
73. The method of claim 72, wherein one serving of the supplement is administered immediately following an exercise period.	The specification supports claim 73 because the specification discloses a food supplement comprising whey protein. See page 10, line 2.

74. The method of claim 25, wherein the supplement is a powder.	The specification supports claim 74 because the specification discloses that the food supplement may be a powder. See page 7, line 1-4.
75. The method of claim 74, wherein the powder is mixed with water for administration as a liquid.	The specification supports claim 75 because the specification discloses that the food supplement may be mixed with water for administration as a liquid. See page 11, line 28-30.
76. The method of claim 25, wherein the supplement further comprises one or more compounds selected from the group consisting of glutamine, alanine, taurine, carnitine, and acetyl-L-carnitine.	The specification supports claim 76 because the specification discloses that the food supplement may comprise glutamine, alanine, taurine, carnitine, and acetyl-L-carnitine. See page 8, lines 4-8.
77. The method of claim 25, wherein the supplement further comprises a compound which mimics or enhances insulin activity.	The specification supports claim 77 because the specification discloses that the food supplement may comprises a compound which mimics or enhances insulin activity. See page 5, line 26 to page 6, line 4.
78. The method of claim 77, wherein the compound is selected from the group consisting of myo-inositol, d-myo-inositol, cis-inositol, epi-inositol, allo-inositol, muco-inositol, neo-inositol, scyllo-inositol, d-chiro-inositol, l-chiro-inositol, and d-pinitol.	The specification supports claim 78 because the specification discloses that the food supplement may comprises a compound which mimics or enhances insulin activity, wherein the compound is selected from the group consisting of myo-inositol, d-myo-inositol, cis-inositol, epi-inositol, allo-inositol, muco-inositol, neo-inositol, scyllo-inositol, d-chiro-inositol, l-chiro-inositol, and d-pinitol. See page 5, line 26 to page 6, line 4.
79. A method for supplementing the diet of a human comprising administering immediately after an exercise period about 28 grams of a dietary supplement comprising an effective amount of L-arginine, about 20 grams of protein, about 3 grams of carbohydrate and an effective amount of at least one substance which increases nitric oxide production in the body selected from the group consisting of glycosidal saponins, ginseng, N-acetyl cysteine, glucomannan, and folic acid.	Support can be found in Example 1, page 10, line 10 to page 11, line 27 which discloses a food supplement comprising, <i>inter alia</i> , Protein 20 g, Carbohydrates 3 g, arginine, glycosidal saponins, ginseng, N-acetyl cysteine, glucomannan and folic acid.
80. The method of claim 79, wherein said protein comprises whey protein.	The specification supports claim 80 because the specification discloses the food supplement may comprise whey protein. See page 10, line 24-28 and page 6, lines 5-20.
81. The method of claim 79, the supplement is administered more than once daily.	The specification supports claim 81 because the specification discloses the food supplement may be administered more than once daily. See page 9, lines 24-30.
82. The method of claim 81, wherein one serving of the supplement is administered immediately following an exercise period.	The specification supports claim 81 because the specification discloses the food supplement may be administered immediately following an exercise period. See page 9, lines 24-30.
83. The method of claim 79, wherein the supplement is a powder.	The specification supports claim 83 because the specification discloses that the food supplement may be a powder. See page 7, line 1-4.
84. The method of claim 83, wherein the powder is mixed with water for administration as a liquid.	The specification supports claim 75 because the specification discloses that the food supplement may be mixed with water for administration as a liquid. See page 11, line 28-30.

<p>85. The method of claim 79, wherein the supplement further comprises one or more compounds selected from the group consisting of glutamine, alanine, taurine, carnitine, and acetyl-L-carnitine.</p>	<p>The specification supports claim 85 because the specification discloses that the food supplement may comprise glutamine, alanine, taurine, carnitine, and acetyl-L-carnitine. See page 8, lines 4-8.</p>
<p>86. The method of claim 79, wherein the supplement further comprises a compound which mimics or enhances insulin activity.</p>	<p>The specification supports claim 86 because the specification discloses that the food supplement may comprises a compound which mimics or enhances insulin activity. See page 5, line 26 to page 6, line 4.</p>
<p>87. The method of claim 86, wherein the compound is selected from the group consisting of N-acetyl cysteine, myo-inositol, d-myo-inositol, cis-inositol, epi-inositol, allo-inositol, muco-inositol, neo-inositol, scyllo-inositol, d-chiro-inositol, l-chiro-inositol, and d-pinitol.</p>	<p>The specification supports claim 87 because the specification discloses that the food supplement may comprises a compound which mimics or enhances insulin activity, wherein the compound is selected from the group consisting of myo-inositol, d-myo-inositol, cis-inositol, epi-inositol, allo-inositol, muco-inositol, neo-inositol, scyllo-inositol, d-chiro-inositol, l-chiro-inositol, and d-pinitol. See page 5, line 26 to page 6, line 4.</p>

CONCLUSION

The courtesies and assistance extended by Examiner Choi to applicant's undersigned attorney are gratefully acknowledged and appreciated.

Claim 25 and new claims 69-87 are believed to be in full compliance with the agreement reached with the Examiner during the interview of June 23, 2003.

Applicants undersigned attorney note that Examiner Choi required a new declaration. Applicants will submit the declaration as soon as possible, however as at least one of the inventors is out of the country, this may take a few weeks.

Applicants believe that this Application is now in condition for allowance and such action is respectfully requested. If for any reason the Examiner believes that contact with the Applicant's attorney would advance the prosecution of this application, he is invited to contact the undersigned at the number given below.

Respectfully Submitted,

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Version with Markings to Show Changes

In the Specification:

At page 1, line 20, immediately below "**SUMMARY OF THE INVENTION**", please add the following two paragraphs:

The present invention provides a method for supplementing the diet of an athlete, comprising administering as part of the diet an effective amount of a supplement comprising an effective amount of L-arginine, a source of amino acids and an effective amount of at least one substance which increases nitric oxide production in the body selected from the group consisting of glycosidal saponins, ginseng, N-acetyl cysteine, glucomannan and folic acid, wherein the source of amino acids is a protein and the composition further comprises a carbohydrate, wherein the weight ratio of protein to carbohydrate is about 7 to 1.

The present invention further provides a method for supplementing the diet of a human comprising administering immediately after an exercise period about 28 grams of a dietary supplement comprising an effective amount of L-arginine, about 20 grams of protein, about 3 grams of carbohydrate and an effective amount of at least one substance which increases nitric oxide production in the body selected from the group consisting of glycosidal saponins, ginseng, N-acetyl cysteine, glucomannan, and folic acid.

In the Claims:

Please cancel claims 27-29, 31-34, 36-38, 40-43, 45-47, 49-57 and 65-67 without prejudice.

Please amend claim 25 as follows:

25. A method for supplementing the diet of an athlete, comprising administering as part of the diet an effective amount of a supplement comprising an effective amount of L-arginine, a source of amino acids and an effective amount of at least one substance which increases nitric oxide production in the body selected from the group consisting of glycosidal saponins, ginseng, N-acetyl cysteine, glucomannan and folic acid, wherein the source of amino acids is a protein and the composition

further comprises a carbohydrate, wherein the weight ratio of protein to carbohydrate is about 7 to 1.

Please add the following new claims.

69. The method of claim 25, wherein one serving of the supplement provides about 20 grams of protein and about 3 grams of carbohydrates.

70. The method of claim 25, wherein one serving of the supplement further provides about 1.5 grams of fat.

71. The method of claim 25, wherein said protein comprises whey protein.

72. The method of claim 25, wherein one serving of the supplement is about 28 grams and the supplement is administered more than once daily.

73. The method of claim 72, wherein one serving of the supplement is administered immediately following an exercise period.

74. The method of claim 25, wherein the supplement is a powder.

75. The method of claim 74, wherein the powder is mixed with water for administration as a liquid.

76. The method of claim 25, wherein the supplement further comprises one or more compounds selected from the group consisting of glutamine, alanine, taurine, carnitine, and acetyl-L-carnitine.

77. The method of claim 25, wherein the supplement further comprises a compound which mimics or enhances insulin activity.

78. The method of claim 77, wherein the compound is selected from the group consisting of myo-inositol, d-myo-inositol, cis-inositol, epi-inositol, allo-inositol, muco-inositol, neo-inositol, scyllo-inositol, d-chiro-inositol, l-chiro-inositol, and d-pinitol.

79. A method for supplementing the diet of a human comprising administering immediately after an exercise period about 28 grams of a dietary supplement comprising an effective amount of L-arginine, about 20 grams of protein, about 3 grams of carbohydrate and an effective amount of at least one substance which increases nitric oxide production in the body selected from the group consisting of glycosidal saponins, ginseng, N-acetyl cysteine, glucomannan, and folic acid.

80. The method of claim 79, wherein said protein comprises whey protein.

81. The method of claim 79, the supplement is administered more than once daily.

82. The method of claim 81, wherein one serving of the supplement is administered immediately following an exercise period.

83. The method of claim 79, wherein the supplement is a powder.

84. The method of claim 83, wherein the powder is mixed with water for administration as a liquid.

85. The method of claim 79, wherein the supplement further comprises one or more compounds selected from the group consisting of glutamine, alanine, taurine, carnitine, and acetyl-L-carnitine.

86. The method of claim 79, wherein the supplement further comprises a compound which mimics or enhances insulin activity.

87. The method of claim 86, wherein the compound is selected from the group consisting of N-acetyl cysteine, myo-inositol, d-myo-inositol, cis-inositol, epi-inositol, allo-inositol, muco-inositol, neo-inositol, scyllo-inositol, d-chiro-inositol, l-chiro-inositol, and d-pinitol.